

A Hop and a Leap (by Robert Bee)

The white board teetered on its casters as the ballistic duster struck it squarely on a scrawled differential equation.

"Fifty metres?" Don Murdoch bellowed, disbelief alloyed with shock. "Fifty lousy metres?"

His eyes flicked back and forth, seeking another object on which to vent his anger. Frustrated, he slammed both fists onto the conference table. The water carafes leaped in fright. One spilled its contents over Dr Bliss's notes, which were frantically snatched from the soggy table before the precious calculations smudged.

"Steady on, Murdoch!" Dr Bliss protested. "Violence isn't going to alter the mathematics." He began sponging the papers with the tail of his ancient dust coat, while his eyes sought the tacit support of his colleagues.

The cause of Murdoch's explosive reaction had been the topic of a marathon project meeting the previous night. Each member of the research team, led by Dr Bliss, had undergone their own version of shock, despair, even depression before reluctantly accepting the agonising truth that stared at them from the latest computer print outs.

"Are you...geniuses..." Murdoch was visibly attempting to bring his raw emotions under some control, "...trying to tell me that after five years of intensive research and God only knows how many tens of millions of dollars, the furthest we can transmit is fifty metres? Are you mad?"

"Mad? No!" Julian Warren, Assistant Research Team Leader at the Trans-Tasman Transport and Electric Corporation met Murdoch's glare firmly. "Disappointed, even shattered? Yes!" Without losing eye contact, Warren indicated his research colleagues gathered in the conference room. "Your dream of a bulk matter transporter was our dream too. The ultimate transport device. Able to instantly relocate vehicles, with passengers and cargo, from one end of the world to the other. We've dedicated the best part of our scientific careers to turning your theories into a working prototype. But..." Warren's brave defiance of the General Manager, Research & Development finally faltered as his inner reserves flickered out and he sank despondently into a nearby chair.

Dr Bliss completed Warren's speech. "But your...our... vision is dead in the water. Torpedoed by cold, hard n dimensional tensors."

"But the prototype in the laboratory... damn it man, I saw it work with my own eyes!" Murdoch hadn't clawed his way to the top by lack of persistence. He drew his Napoleonic stature up to full height and stabbed the air with a manicured finger. "Bliss, Warren, you were witnesses. The remote controlled fork lift? One second it was here, next it was...there." His hands pantomimed the landmark experiment.

"Yes, we were there." Dr Bliss wiped the last damp formula on his notes. "And how long is the main laboratory, Murdoch?"

The coy tone of Bliss's voice should have warned of the subtle trap being laid.

"About forty metres, give or ..." Murdoch frowned.

"Exactly!" Dr Bliss wearily lowered himself into a chair, feeling as grey as his remaining hair.

The remaining scientists followed his example, but Murdoch continued to stand over them, as if by sheer force of will he could change the results of the most sophisticated mathematics known to man.

"Then the later tests, the long range ones..?" Murdoch left the question hanging, still daring to hope.

Dr Bliss shook his head slowly. He lacked the energy to speak. Like all his team, he desperately needed sleep. But this last question had to be answered.

"I saw the fork lift enter the trans terminal. It disappeared perfectly," Murdoch prompted. "One hundred percent transferral."

"Which is more than can be said for its reappearance at our cross town warehouse. Thank God it was remotely driven." Warren visibly shuddered, recollecting the grotesquely tortured mass of metal that had exited from the rec terminal. Analysis revealed that the metal had not only been deformed but transmuted to other elements, some still defying identification.

"Look, Murdoch...Don." Dr Bliss softened his tone, hoping quiet reason might drive home the inescapable truth. "Since those failures over long distances, the team checked every system component, every circuit design. And found no malfunction, no errors. We then re-checked the theory."

"And..?"

"Until the day God re-invents quantum physics, fifty metres is the limit. Objects big, small, fast, slow, organic or mineral. Safe and foolproof. But fifty metres, and not a centimetre more."

"Incredible," the lab assistant enthused.

The drive shaft spun silently on its bearings. Only the dynamometer readings gave any indication of the inordinate power being transmitted to the flywheel at its extremity. He threw a switch and friction began its long task of bringing the rotating mass to a standstill.

Dr Horatio Smark, who'd been analysing the walnut sized object supplying the power for the experiment, suppressed his inner elation. He straightened his tall gangly frame, scratched his flaming red beard and acknowledged the lab assistant's comment with a poker face.

"Yes, it does show promise."

"Shall I schedule a demonstration for the Chief of Research, Dr Smark?"

"No!" Smark snapped. But then he tempered his brusqueness. "It's not ready yet."

John Upsdell had worked on Smark's stored energy source project for over a year. They'd developed a miniature storage cell with a capacity that would give an oil sheik a coronary.

He still didn't understand Smark's reticence to publicise his extraordinary achievement. He seemed afraid of success.

In the canteen at lunch, Upsdell bent the ear of his fellow lab assistant, Greg Slater, on the peculiar behaviour of research scientists.

"You wouldn't, of course, be referring to our friend 'Hornblower' Smark?" Slater asked, his mouth full of egg sandwich.

"Amongst others," Upsdell replied guardedly.

"I'd be careful of getting too close to that one," Slater said. "They don't call him Hornblower because of his naval namesake."

Upsdell puckered his bushy eyebrows. "Come on. Give."

"Well," Slater lowered his voice, "rumour has it that six years ago, Smark was on the same research team as Murdoch ..."

"You mean the..?"

"Yes, but he wasn't GM, R&D back then. Just another research scientist. Cocky bastard. Hasn't changed. Murdoch happened on the basics of this mass transporter they're so excited about. Around the same time, he stood in three months for the Chief of Research. He used his position to help his colleague" Slater gave a sly wink at this point "by seconding him to our London Research Centre. To

supervise a special project." He paused to sip his coffee.

"That was a good break for Horrie," Upsdell suggested.

"Ah, that's where the nickname comes in." Slater was warming to the topic. "While Horny was in London, Murdoch finished his calculations on the transporter and informed management of its fantastic potential. Domestic, commercial, military transport, from A to B in the blink of an eye. Real 'Beam me up Scotty' stuff. Top brass were so impressed they immediately promoted Murdoch to Director, Research and later to GM. When it's released on the market, it will make the company billions."

"I still don't see where.."

"Your boss Smark returned to Sydney and started blowing his horn, claiming the mass transporter discovery had been his, and that Murdoch had stolen his theory."

"Ouch!"

"Exactly! Unfortunately for Smark, he couldn't produce documents to support his claim, while Murdoch had provided volumes of notes and calculations, mostly handwritten, when he'd announced his findings."

After the test that morning, Upsdell recalled, Smark had shut himself in the lab office to write up his test log and diary. Upsdell's last glimpse before heading off to lunch was of Smark locking the documents in his private safe. Was this his practice of years, or a new habit he'd developed? Once bitten...?

"How did the other research staff react to Horrie's claims?"

"Evenly divided," Slater answered, stirring his coffee. "Murdoch had never been popular. He had all the grace of a Panzer tank. Still has. But he had the notes. And as Director Research, a lot of influence." He glanced around the canteen, then lowered his voice. "Then a strange thing happened. After blowing his horn and alienating half his colleagues, Smark, overnight, pulled his head in. The invention was going to revolutionise transport world wide, and make the company obscene profits, but, the more Murdoch strengthened his claim and gained kudos from the Board, the quieter Smark became. Once, I even caught him looking very smug." Slater paused to consider. "Damned if I know what he had to smile about."

Upsdell stood to return to the lab. "One thing. How did Horrie manage to keep his job, if he made such slanderous claims against his Director?"

Slater smiled over his coffee. "To management he may have been a giant pain in the proverbial. But even they can recognise genius. They just couldn't afford to let him go across to the competition."

"Tell me, Greg. Did Murdoch steal Horrie's theory?"

"We'll probably never know."

"Don't argue. Just do it." Don Murdoch spoke more sharply than he'd intended. Was he losing it, he wondered. He'd used his authority as General Manager to demand another test between the two company sites, a distance of just under five kilometres. Dr Bliss had protested loudly against the waste of time and resources. His protest turned to rage when Murdoch produced a sheep's carcass and insisted it be placed on the seat of the test vehicle. Now Murdoch and Bliss were at the rec station, waiting for the trial to begin.

"Murdoch, this is unscientific," Bliss fumed.

"Science be bugged," Murdoch snapped. "I'm after results."

"We've already..."

"I have to see for myself. Do it!"

His face flushed with resentment, Bliss spoke briefly into the communicator, then turned to Murdoch. "It's coming through now."

Murdoch wasn't listening. He was watching the rec terminal over Bliss's shoulder. He adjusted his horn-rimmed glasses and wiped the sweat from his balding scalp. His eyes widened. He'd been told. Now he saw. And regretted his large dinner.

Murdoch was due to make a progress report to Trans-Tasman's Chief Executive the next day. His meteoric career was on the line. For the first time in four years, as he retched into a dust bin, he thought of Horatio Smark.

"So you're Dr Horatio Smark?" Linus Dempster made it more a challenge than a question. "I hear you're on to something big."

"Spies are still alive and well in the company, I see," said Smark, returning the challenge.

"Come now," Dempster walked from behind the huge mahogany desk. "As Chief Executive of this company, I have to know what my employees are doing. And I'm told you're doing good work." He extended his hand and gripped Smark's firmly. For a man in his late fifties, with his remaining hair a rich silver, the Chief Executive prided himself on his fitness.

They were in Dempster's plush office. Smark had finally made a detailed report on his project status to the Chief of Research. He had also secretly deposited a signed and dated copy of all his notes in a bank security box.

"Your Chief informed me of the power pod." Dempster led Smark to lounge chairs by a coffee table. "I want you to tell me all about it. Tea or coffee?"

When Smark had ended his account of the power cell's performance, Dempster contemplated the ceiling for half a minute, computing dollars, then levelled his gaze at Smark. "Why doesn't GM, R&D know about this? Why have you kept this secret for so long?"

Smark's tentative answer was cut off by the secretary announcing the arrival of Don Murdoch.

"Just the man. Send him in." Dempster indicated that Smark should remain seated.

Murdoch strode in, like a matador to meet the bull. He still hadn't decided how much he should tell Dempster. He hoped to find an eleventh hour mistake in the calculations that would vindicate the millions of dollars the company had spent at his instigation. He came to an abrupt halt at Dempster's first words.

"You know Dr Smark, I believe."

Murdoch saw Smark, seated with a cup in his hand, apparently at ease in Dempster's office. A sudden dread, a premonition of what was in store, passed over him like a wave.

And just as quickly, he recovered. "Yes, Linus." With a steady hand, he poured himself a cup of coffee, then sank casually into one of the chairs. "We worked together years ago."

Smark and Murdoch watched each other across the rims of their cups. Dempster sat, enjoying the charged atmosphere while he formulated and discarded numerous questions, finally settling for the obvious. "Don, Dr Smark was telling me about his revolutionary discovery." He looked Murdoch in the eye. "What do you think of it?"

Murdoch had no knowledge or interest in Smark's current project. A culpable lapse for the GM, R&D. But his focus was on the transporter. His transporter. Also, he wasn't certain which discovery was being discussed here. He took refuge in a platitude. "I think it shows promise."

"More than just promise," Smark interjected. "It will...go a long way." Watching Murdoch carefully, he emphasised the last four words.

Murdoch froze. He looked from Smark to Dempster. What was happening? Why was Smark here?

"I believe you were going to report on progress with the mass transporter, Don," Dempster prompted. "I understand you witnessed a field test yesterday." Sensing Murdoch's reluctance to reply, he added. "It's all right. You can speak openly. I'm sure Dr Smark will be discreet."

"Yes, we all know about Smark's discretion," Murdoch said sarcastically, then gave a brief but optimistic report. "We've had successful transmissions," he concluded. "We're now working out some small problems."

"Small?" Dempster said. "How small?"

Murdoch struggled for a safe reply. He knew it was a career milestone. He had an uncharacteristic urge to bite a manicured fingernail.

From the depths of his lounge chair, Smark answered for him. "I'd say fifty metres is pretty small."

"Damn you! How did you..." Murdoch sprang from his chair, spilling coffee over Dempster's shag pile carpet.

"...find out?" Smark asked. There was an unfamiliar gleam in his eyes. "I didn't. I knew! I've known all along."

He stood and faced Murdoch across the coffee stain.

"What surprised me initially," Smark continued, "was that you didn't know also. You were promising world spanning transporters, when my notes..." he let the last words hang, daring the other man to contradict him, "...my notes clearly indicated there was a theoretical limit to the effective range."

Dempster leaned forward in his chair, his body tense, uncertain of what demons he had released. His decades honed instincts told him his company was on a brink...or a bright new shore.

"After you were promoted and I was shunted aside, I cleared out my desk. Behind a drawer, I found one torn sheet from my calculations. One sheet you had overlooked." Smark nodded, remembering. "Then I knew you didn't know. I must admit, it made me smile."

"All these years, you let me chase an impossible dream?"

Without reply, Smark moved to the window, his tall back to Murdoch and Dempster.

Dempster cleared his throat. "Am I to take it, Don, that all Dr Smark's claims from that unfortunate episode were true?"

Murdoch shivered at the chill in the Chief Executive's voice. He knew his career with Trans-Tasman had come to an abrupt and undignified end. However, he couldn't retire from the battlefield without a parting shot. "It seems you'll have your recognition after all, Horatio. But it's a pyrrhic victory." His voice rose in perverse triumph. "What possible use is your fifty metre lemon?"

Dr Horatio Smark gazed out the window, across the sprawl of tall buildings and congested roads, towards the Kingsford Smith International Airport with its four runways and queues of impatient taxiing jets. He looked down at the tiny power pod he had subconsciously taken from his pocket. He turned to Linus Dempster, and smiled.

The Chairman of Trans-Asian Transport and Electric had his secretary alert his chauffeur. In the penthouse foyer, he stepped through the "Car Park, Basement" terminal and emerged a short distance from his limousine. The chauffeur started the Rolls and steered it through the "George Street, South" basement terminal. Sunlight and morning traffic surrounded the Chairman.

The limousine encountered other Murdoch Hops at each intersection. None exceeded fifty metres. Traffic flowed continuously in all directions. Vehicles entered their designated trans terminal at the intersection and emerged from the rec terminal on the opposite side or in the cross street. Computers ensured smooth mergings. Traffic jams were now a dim memory of a past era.

The Chairman's limousine continued without delays to the Pymont International Terminal. The chauffeur guided the car through the Customs building, then the Ticket Check. After final clearance, he drove through the Automatic Power Pod Installer, turned into the desired lane and, without hesitation, through the trans terminal. The jump delivered the limousine through the rec terminal in Paris, where the Chairman attended a performance of 'La Boheme' that evening.

During intermission, sipping champagne, he pondered on how the power pod, carried "in flight" with the transported object, transformed a humble unaugmented Murdoch Hop to a sublime leap. A mid terminal source of energy was not allowed for in Smark's original maths. The pod, with its previously unheard-of energy density, amplified the mid-transmission field strengths, creating a new solution to the tensor equations. Huge world spanning jumps became a reality.

His company had made, and would go on making, billions of dollars in profit. A prototype was being built, in conjunction with an enlarged pod, for Earth Lunar transport. He wielded enormous power with world trade and governments. Yet, despite all the scientific honours heaped upon him, despite all his international prestige and influence, the Chairman's face had still managed to turn the colour of his beard when the Company named the world transporter, the Smark Leap. After him.